Claims

1. A method for achieving a high-resolution 3D reconstruction of a crystal, comprising the step of growing a crystal in a way known in the art characterized by the steps of

Crushing the crystal into microcrystals

Vitrifying a sample of the microcrystals for cryoTEM

Recording a tilt series

Obtaining a first 3D reconstruction using an iterative reconstruction method in which a prior prejudice distribution is refined in at least one step on the basis of a comparison with the collected image information

2. A method according to claim 1, wherein the iterative reconstruction method is the a filtered backprojection followed by the COMET procedure

3. A method according to claim 2, further comprising the step of:
if the sample is of high quality, determining the repetitive structure of the crystal and, if possible, the space group of the crystal.

4. A method according to claim 3, further comprising the following steps:
If the space group could be determined, refine the geometry and obtain a second 3D reconstruction including information about the space group.

5. A method according to claim 4, further comprising the following step:
if the space group could not be determined, perform correlation averaging on the sample.